



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/616,686 | 07/10/2003 | Darren M. Schambach | 02-677 | 2568 |

719 7590 03/31/2005

CATERPILLAR INC.
100 N.E. ADAMS STREET
PATENT DEPT.
PEORIA, IL 616296490

EXAMINER

SWENSON, BRIAN L

| ART UNIT | PAPER NUMBER |
|----------|--------------|
|----------|--------------|

3618

DATE MAILED: 03/31/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/616,686

Applicant(s)

SCHAMBACH, DARREN M.

Examiner

Brian Swenson

Art Unit

3618

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 July 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 7/10/03.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims 1, 4-14 and 17-18 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 2,737,254 issued to Bayley.

Bayley teaches in Figures 1-3 and a method in respective portions of the specification of a hood positioning apparatus for a hood (1) of a vehicle of the type having a frame (2), comprising: at least one fluid powered actuator (8; hydraulic [Col. 5, line 43] cylinder) coupled to the hood and the frame (Col. 2, lines 2-3); and a circuit (Figure 3) in communication with the actuator and structured and arranged to control the actuator.

In regards to claim 4, see Figure 3.

In regards to claim 5, Bayley teaches of a flow control device (12) in fluid communication (Figure 3) with the actuator.

In regards to claim 7, Bayley teaches of a rod end (22) and a cap (18) end for the hydraulic cylinder.

In regards to claims 8-9 see check valves (88 and 89) and Col. 2, lines 66+.

In regards to claims 11- 12 Bayley teaches of the actuator comprises a rod end (22) coupled to the hood, and a cap end (18) coupled to the frame; the circuit comprises

Art Unit: 3618

a first flow control device (88) in fluid communication with the rod end; the circuit comprises a second flow control device (89) in fluid communication with the cap end; and the circuit further includes a flow prevention device (12) in fluid communication with both the cap end and the rod end and actuatable to decrease the fluid pressure in the cap end in response to fluid pressure at the rod end.

In regard to claims 17 and 18 see control switch (98) and further Col. 3, lines 5+.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which the subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-18 rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,335,926 issued to Stolle.

Stolle, teaches in Figures 1 and 2 and respective portions of the specification of a positioning apparatus for a cover of a vehicle (see at least Col. 1, lines 5-12) of the type having a frame, comprising: at least one fluid powered actuator (hydraulic cylinders 1,2) coupled to the cover and the frame; and a circuit (Figure 1) in communication with the actuator and structured and arranged to control the actuator.

Stolle discloses the positioning apparatus is for a vehicle cover, but does not specifically state if the cover is a hood. It would have been obvious to one having ordinary skill in the art at the time of invention to use a hood as the vehicle cover. One

would be motivated to use the hood of the vehicle as the vehicle cover to allow the closing of the hood to be automated by the hydraulic actuator.

In regards to claims 2-3 and 15-16 Stolle teaches of a backup power device (emergency pump 16) in fluid communication with the actuator and teaches the device is manually activated (see at least, Col. 1, lines 54-55).

In regards to claim 4, see Figures 1 and 2.

In regards to claim 5 Stolle teaches of the circuit comprises at least one flow control device (7) in fluid communication with the actuator.

In regards to claims 7 and 9 Stolle teaches of the actuator is a hydraulic cylinder (1 or 2) having a rod end (10) and a cap end (see where reference numeral 3 is located); and the circuit comprises a flow control device (7) in fluid communication with at least one of the rod end and the cap end.

In regards to claim 8 Stolle teaches of the circuit further includes a flow prevention device (see relief valves 14 or 15) in fluid communication with one of the cap end and the rod end and actuatable to decrease the fluid pressure in the cap end or the rod end in response to pressure.

In regards to claim 10 Stolle teaches the flow control device (7) comprises a flow metering portion, the metering portion is taken to be the switch that reverses the flow for the reversing valve.

In regards to claims 11 and 12 Stolle teaches of the actuator comprises a rod end (10) coupled to the hood, and a cap end (see where reference numeral 3 is located) coupled to the frame; the circuit comprises a first flow control device (14) in fluid

Art Unit: 3618

communication with the rod end; the circuit comprises a second flow control device (15) in fluid communication with the cap end; and the circuit further includes a flow prevention device (7) in fluid communication with both the cap end and the rod end and actuatable to decrease the fluid pressure in the cap end in response to fluid pressure at the rod end.

In regards to claim 14, the rate of movement of the hood is inherently controlled when the hood's center of gravity passes over the attachment point, in the invention taught by Stolle, see also Col. 2, lines 1+.

In regard to claims 17 and 18, Stolle's reversing valve is used to control the flow of hydraulic fluid to either raise or lower the hydraulic cylinders (1,2) depending on the position of the reversing valve. Stolle does not state if the pressure in the hydraulic circuit is maintained if the reversing valve is placed in a neutral setting. It would have been obvious to one having ordinary skill in the art at the time of invention to maintain the pressure of the hydraulic circuit if the reversing is placed in a neutral position. One would be motivated to maintain the pressure to allow the vehicle cover to be placed in an intermediate position between the fully open or closed position.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Patent No. 4,665,695 issued to Rau et al. teaches of using flow metering within a hydraulic circuit.

U.S. Patent No. 2,622,400 issued to Greer and U.S. Patent No. 2,800,324 teach of other hydraulic operated hood closures.

U.S. Patent No. 6,217,105 issued to Hollerbach teaches of a hydraulic rear closure.

U.S. Patent No. 5,682,807 issued to Mentink teaches of a hydraulic circuit setup.

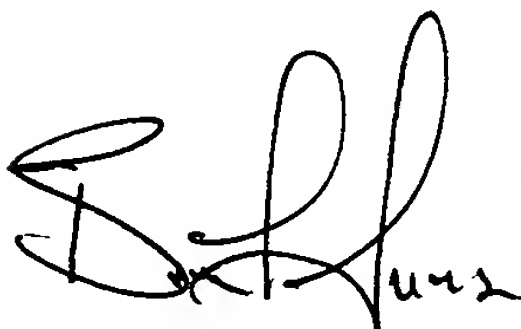
U.S. Patent No. 6,217,108 issued to Sasaki teaches of a vehicle hood apparatus.

U.S. Patent No. 4,359,119 issued to Kammerman teaches of a hood closure in relation to a center of gravity.



Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian Swenson whose telephone number is (703) 305-8163. After April 10th the examiner can be reached at (571) 272-6699. The examiner can normally be reached on M-F 9-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christopher Ellis can be reached on (703) 305-0168. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

 3/15/05
bls

Brian Swenson
Examiner
Art Unit 3618

 
COMMUNICATIONS SECTION
TECHNOLOGY CENTER